

Application No.: 10/543076

Docket No.: 13555-00001-US

**AMENDMENTS TO THE CLAIMS**

1. (Currently amended) An assay for testing a sample for the presence or absence of inhibition of the enzymatic conversion of 1-hydroxy-2-methyl-(E)-butenyl 4-diphosphate into isopentenyl diphosphate and/or dimethylallyl diphosphate by comprising the following steps:
  - (a) reacting an aqueous mixture containing 1-hydroxy-2-methyl-(E)-butenyl 4-diphosphate, a 1-hydroxy-2-methyl-(E)-butenyl 4-diphosphate reductase, and a reducing agent under predetermined reaction conditions for a predetermined period of time;
  - (b) analyzing the reaction mixture obtained in step (a) for the consumed amount of 1-hydroxy-2-methyl-(E)-butenyl 4-diphosphate and/or said reducing agent and/or for the produced amount of isopentenyl diphosphate, and/or dimethylallyl diphosphate and/or an oxidation product of said reducing agent;
  - (c) repeating step (a) in the presence of the sample to be tested;
  - (d) repeating step (b) with the reaction mixture defined in step (c);
  - (e) comparing the results of steps (b) and (d).
2. (Currently amended) An assay for testing a sample for the presence or absence of inhibition of the enzymatic conversion of 1-hydroxy-2-methyl-(E)-butenyl 4-diphosphate into isopentenyl diphosphate and/or dimethylallyl diphosphate by comprising the following steps:
  - (a) reacting an aqueous mixture containing 1-hydroxy-2-methyl-(E)-butenyl 4-diphosphate, a 1-hydroxy-2-methyl-(E)-butenyl 4-diphosphate reductase, NAD(P)H, flavodoxin, and a flavodoxin reductase under predetermined reaction conditions for a predetermined period of time;
  - (b) analyzing the reaction mixture obtained in step (a) for the consumed amount of 1-hydroxy-2-methyl-(E)-butenyl 4-diphosphate and/or NAD(P)H and/or for the produced amount of isopentenyl diphosphate, and/or dimethylallyl diphosphate and/or NAD(P)<sup>+</sup>;
  - (c) repeating step (a) in the presence of the sample to be tested;

Application No.: 10/543076

Docket No.: 13555-00001-US

- (d) repeating step (b) with the reaction mixture defined in step (c);
  - (e) comparing the results of steps (b) and (d).
3. (Previously presented) The assay according to claim 2, wherein the consumed amount of NAD(P)H is measured photometrically.
  4. (Previously presented) The assay according to claim 2, whereby in steps (b) or (d) the produced amount of NAD(P)<sup>+</sup> or isopentenyl diphosphate and/or dimethylallyl diphosphate is tested.
  5. (Previously presented) The assay according to claim 4, wherein the produced amount of NAD(P)<sup>+</sup> is measured photometrically.
  6. (Previously presented) The assay according to claim 2, wherein NADPH is used as said NAD(P)H.
  7. (Previously presented) The assay according to claim 2, wherein after the predetermined period of time the reaction is stopped by addition of trichloroacetic acid.
  8. (Previously presented) The assay according to claim 2, wherein steps (a) and (c) are carried out at 37°C for 1 hour under aerobic conditions.
  9. (Previously presented) The assay according to claim 2, wherein steps (a) and (c) are carried out under anaerobic conditions.
  10. (Previously presented) The assay according to claim 2, wherein said 1-hydroxy-2-methyl-(E)-butenyl 4-diphosphate reductase is IspH.
  11. (Previously presented) A sample capable of inhibiting the enzymatic conversion of 1-hydroxy-2-methyl-(E)-butenyl 4-diphosphate into isopentenyl diphosphate and/or dimethylallyl diphosphate identified according to claim 2.